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22. HEXAGONAL CELL OF LAC INSECT

The normal shape of the cells of lac insects is elongate for male and globular for female. All lac male insects perish after mating and then entire colonies consist of females. A single female lac cell is normally smoothly rounded. However, occurrence of hexagonal abnormal cells, referred to as 'crown shaped cell' (Mahdihassan 1968), has also been reported occasionally.

Hexagonal cells are not characteristic of any particular species of lac insect or the host-plant (Chauhan 1967), but they have been so far noticed only in 3 species of lac insects:

(i) Mahdihassan (1948) has reported that in *Kerria communis* some male insects on dispersal and due to sex reversal become hexagonal females.

(ii) Mahdihassan (1968) has reported that such crown shaped cells are numerous in *Kerria sindica*.

(iii) Chauhan (1967) has found such cells in both *rangeeni* and *kusumi* forms of common Indian lac insect, *Kerria lacca*.

The number of host-plants, on which such cells have been reported earlier, is also small. Whereas the above records of Mahdihassan are on *Zizyphus jujuba*, *Ficus mysorensis* and *Acacia arabica*, Chauhan (1967) has found them on 9 plant species, excluding *Ficus*.

Recently in our colonies of lac insects, one hexagonal cell, belonging to *Kerria* sp., has been growing on a fig plant, *Ficus carica* Linn. (Fam. Moraceae), at the Science College campus of the Patna

University. It is developing in complete isolation from any other lac cell, and is following the summer generation life cycle (i.e., Oct./Nov. 1969—May/June 1970).

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23. OCCURRENCE OF *MELANAGROMYZA OBTUSA* (MALLOCH) ON BHINDI

The pod fly, *Melanagromyza obtusa* (Malloch) has been recorded as a serious pest of *Cajanus indicus*, "cajan", (Hindi-Arhar) in Madhya Pradesh, Bihar, Punjab, Uttar Pradesh, Himachal Pradesh and Orissa by Pradhan (1969)¹. So far no host plants other than *Cajanus indicus* were recorded. However, the authors have noted the incidence of *Melanagromyza obtusa* on *Hibiscus esculentus* (Hindi-Bhindi) at Raipur in Madhya Pradesh.

During the course of observation in the month of April, 1970, the attack was noted on leaf pedicels of Bhindi plants. The infested leaves were found dried and dropping down. The maggots bored the leaf pedicels (stalks) which consequently resulted in drying of leaves. While recording the incidence of pest in the field, 30 per cent plants were found attacked by this pest. There were 1 to 3 larvae per pedicel.

In the course of rearing work, it was found that 17.4 per cent of the pupae were parasitised by *Eurytoma* sp.

This is the first report of the incidence of *Melanagromyza obtusa* (Malloch) on *Hibiscus esculentus* in Madhya Pradesh.

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¹ PRADHAN, S. (1969): Insect pests of Crops. National Book Trust, India, Delhi. pp. 71.